

**United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine
Science and Technology**

**Survey Protocol for the Interstate Movement of Citrus
Nursery Stock from Areas Quarantined for Citrus
Canker, Citrus Greening, and/or Asian Citrus Psyllid
2018**

In support of the APHIS Citrus Nursery Stock (CNS) Final Rule ((78 FR 63369- 63373, Docket No. APHIS-2010-0048), this survey protocol is intended as a supplement to the ‘Protocol for Interstate Movement of Citrus Nursery Stock from Areas Quarantined for Citrus Canker, Citrus Greening, and/or Asian Citrus Psyllid (USDA 2018). This survey protocol details rates of inspection, sampling, and testing required for interstate movement of CNS as described in the protocol (USDA 2018).

Detection Survey for CC: Visual inspection of plants for disease symptoms must be performed by an inspector at an interval not to exceed 30 calendar days. Leaves from plants showing symptoms of CC must be tested using Work Instructions approved by APHIS.

Detection Survey for ACP: Visual inspections must be performed by an inspector at an interval not to exceed 30 calendar days. Visually inspect new flush growth of all CNS intended for interstate movement. Submit any suspect specimens to an APHIS approved identifier. Visual inspection can be augmented by using yellow sticky cards (1 card per 1000 ft²), vacuum suction sampling, tap sampling or other methods approved by APHIS.

Detection Survey for CG: Visual inspection of plants for disease symptoms must be performed by an inspector at an interval not to exceed 30 calendar days. Leaves from plants showing symptoms of CG must be tested by a diagnostician certified by APHIS at a laboratory accredited by APHIS using the APHIS Work Instruction.

In addition, CG plant tissue sampling and testing must be conducted according to Table 1.

Table 1. Testing intervals for CNS tree types.

Tree Type	Testing Interval
Mother/scion	Every plant must be tested once per calendar year at an interval not less than 11 months
Increase	Increase trees must be tested every 6 months – see Table 2 for rate of sampling
Production: sold prior to 12 months of age	Testing is not required
Production trees: held for longer than 12 months	Trees must be tested at 12 months and every 6 months thereafter – see Table 2 for rate of sampling

Tissue samples should be collected from plants randomly selected from the lot. Tissue samples must be tested by a diagnostician certified by APHIS at a laboratory accredited by APHIS using the APHIS Work Instruction. Sample sizes required for CNS for interstate shipment are provided in Table 2.

Table 2. Sampling size required for CNS lots designated for interstate shipment.

Plants per Lot	Number of Plants to Sample¹	Number of Laboratory Tests Required²
1 to 100	All plants	1 to 25
201 to 300	195	49
301 to 400	220	55
401 to 500	230	58
501 to 1,000	265	67
1,001 to 1,500	275	69
1,501 to 2,000	280	70
2,001 to 2,500	285	72
2,501 to 3,000	290	73
3,001 to 3,500	295	74
> 3,500	300	75

¹ Each plant sample consists of 4 leaves.

² Laboratory tests may be run on a composite sample taken from one to four CNS (4-16 leaves).

Supporting Documents:

USDA. 2017. Protocol for Interstate Movement Of Citrus Nursery Stock Material From Areas Quarantined For Citrus Canker, Citrus greening, and/or Asian citrus psyllid - 2017. United States Department of Agriculture.